

Date: Thursday, 12/20/2007 3:17:49 PM
 User: Kim Johnston

Process Sheet

3

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : AFT X-TUBE EXT HEIGHT(-013)
 Job Number : 36471
 Estimate Number : 10563
 P.O. Number :
 This Issue : 12/20/2007 S.O. No. :
 Prsht Rev. : NC
 First Issue : 1 / Type : LANDING GEAR
 Previous Run : 36470
 Part Number : D205596107
 Drawing Number : D205596107
 Project Number : N/A
 Drawing Revision : A
 Material :
 Due Date : 1/15/2008
 Qty: 1 Um: Each
 Written By :
 Checked & Approved By :
 Comment : Est Rev:D 05.03.21 Added bending procedure KJ/JLM

OK 08.02.22
 PER PRELIM ISSUE
 OF D205-596-107
 REV. B
 08.12.21

Additional Product

POSITIVE
RECALL

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy D205-594 bluefile & type labels per PPP D205-596-107CHG001

KJ 08-01-14
 ①

2.0 D2890 Aft Crosstube



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D2890 Aft Crosstube B36621

EL 8-1-11

3.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Mark 20.36" for cutting from tangential line in the straight section from D2890 as per Dwg wall template. EL 8-1-11

4.0 QC15 DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

10-01-11
 ①

5.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1.

1-Cut as per Dwg D205-596-107

ANM 08-01-17

EL/JP

8-1-14

2-Deburr & Inspect for surface damage. Polish cut surface. Scribe part # and batch # on one end of tube.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 12/20/2007 3:17:49 PM
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT X-TUBE EXT HEIGHT(-013)

Job Number: 36471

Part Number: D205596107

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/01/25

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



ALUM 08-01-16



Comment: HAND FINISHING RESOURCE #1

Touch up ends of the tube with Chemical Conversion Coat per QSI 005 4.1

8.0

QC5

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08/01/25

9.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside with Immron per QSI 005 4.2

RT

08-02-06

10.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

08/01/25

11.0

~~D2056000~~

D3595 063530

Abrasion Strip

RUBBER cushion



08/02/25



Comment: Qty.: 1.68107(s)/Unit Total: 1.68107(s)

Pick:

Qty Part number

Description

Batch

4

2 D2056-000(10.09") Abrasion Strip

35125

RT

08 02 -07

12.0

D29401

Support



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number

Description

Batch

2 D2940-1

Support

32780

RT

08-02-07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: ☒ Date: 08/02/22
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 12/20/2007 3:17:49 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT X-TUBE EXT HEIGHT(-013)

Job Number: 36471

Part Number: D205596107

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

MS2192028

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number

Description

Batch

4 MS21920-28

Clamp

106864

RT 08-02-07

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips per QSI 035 position using DT8582. Install supports and clamps per Dwg D205-596-107. Torque clamps to 80-100 in lb. Seal edges of support using Sikaflex

A/R ~~Sikaflex 291~~

Expiry date: 08-11-01

magachord 106695

RT 08 02 08

✓ rubber cushions

207.12.21

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

6 08/01/14 40

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-596-107

Location:

PPP Rev:

D

8/2/15

50

1X

17.0

QC21

FINAL INSPECTION/W/O RELEASE



①

Comment: FINAL INSPECTION/W/O RELEASE

2008/02/22

Job Completion



2008/2/19

①

POSITIVE RECALL

EFFECTIVE 07/22/ AUTH

RELEASED DATE 08/02/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

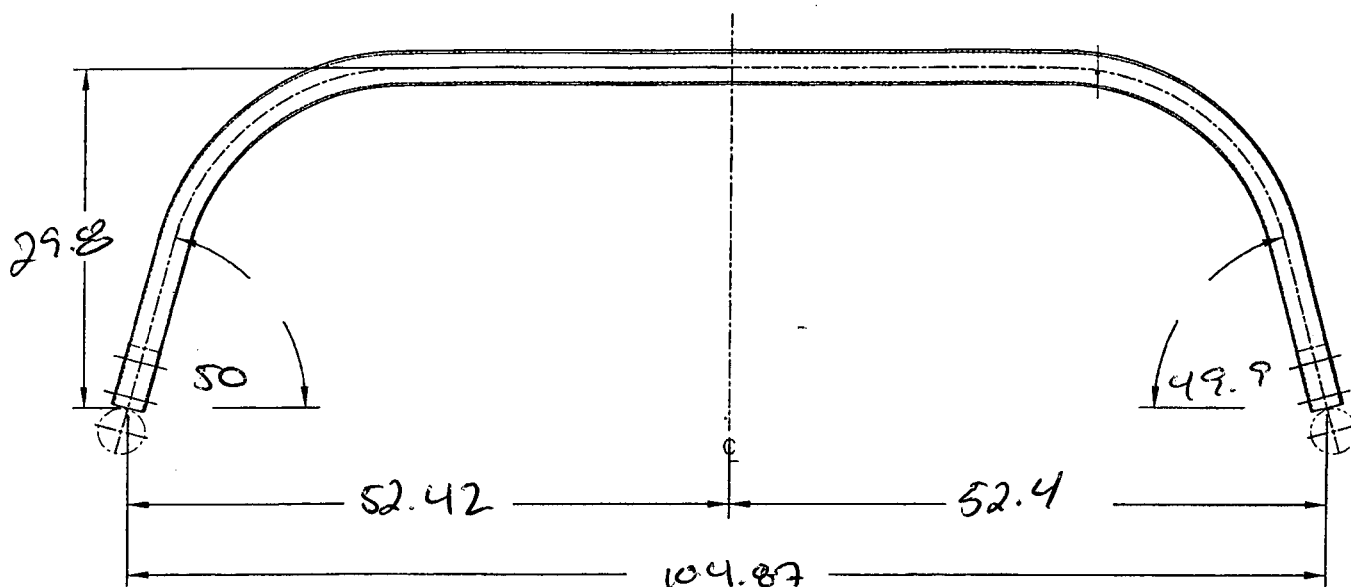
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	36471
Description: Crosstube High-High Aft		Part Number:	D205-596-107
Inspection Dwg: D205-596-107	Rev: 1	Page 1 of 1	

Required Dimension	Min	Max
Height	29.7	29.9
1/2 Span	52.4	52.6
Angle	49	52
Total Span	104.8	105.2



Comments

QC15 Inspection	
Date	06-01-11

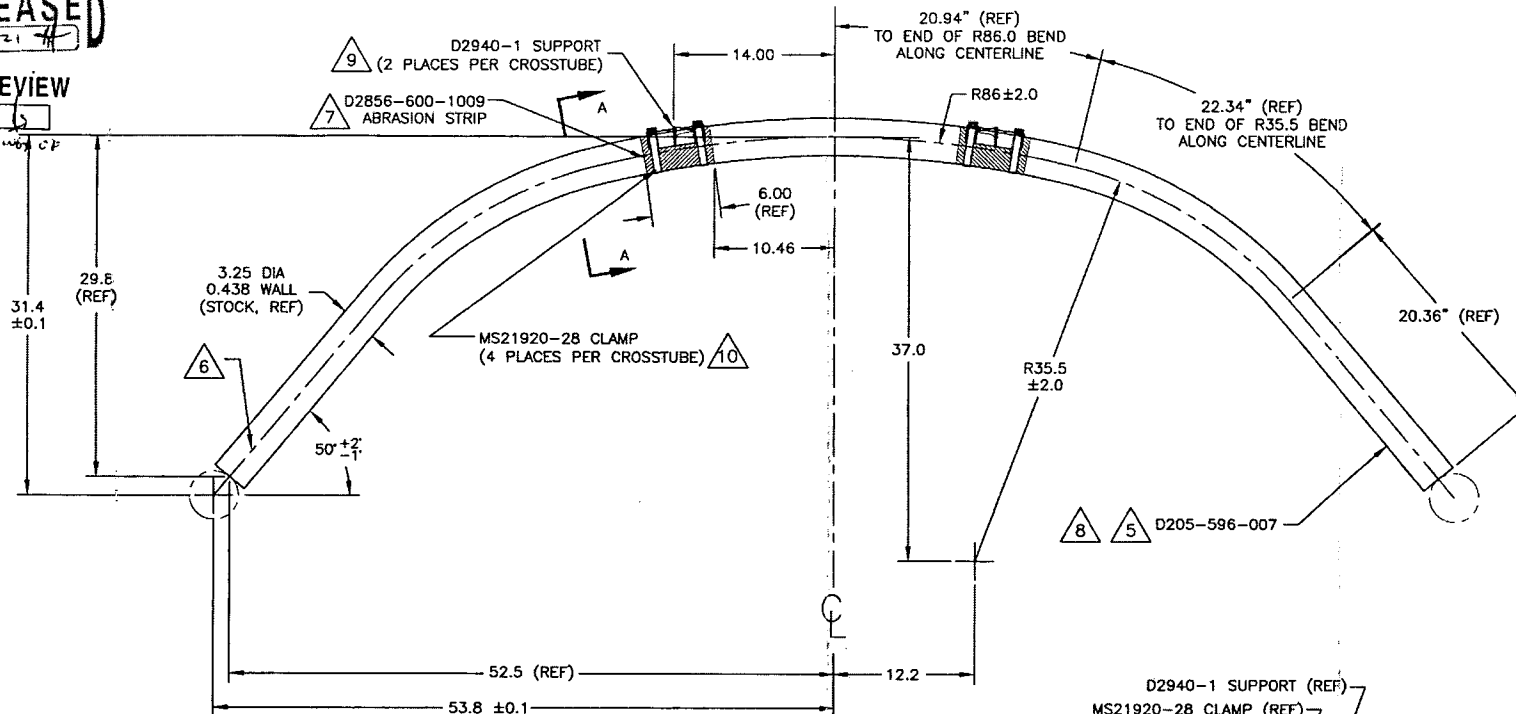
Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	

RELEASED
02.11.21

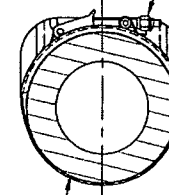
UNDER REVIEW

07.12.04

MAGNETICALLY COATED
SUPPORTS



D2940-1 SUPPORT (REF)
MS21920-28 CLAMP (REF)



SECTION A-A
SCALE 2:5

D2856-600-1009 ABRASION STRIP (REF)

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) MATERIAL: MANUFACTURE FROM D6008-180
FINISHED LENGTH = 127.28
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 6) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS
- 7) INSTALL D2856-600-1009 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2940-1 SUPPORT, PER QSI 035
- 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005\" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 9) SEAL EDGES OF SUPPORTS USING SIKAFLEX-241/-291 SEALANT (OPTIONAL)
- 10) TORQUE CLAMPS 80 TO 100 IN-LB

WORK ORDER
36411
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A	02.11.20	NEW ISSUE
DESIGN	DRAWN BY	DART DART AEROSPACE LTD. HAMPSHIRE, ENGLAND, CANADA
CHECKED	APPROVED	DRAWING NO. D205-596-107
DATE	TITLE	SHEET 1 OF 1
02.11.20	CROSSTUBE AFT EXTENDED	SCALE 1:10

PARTS LIST:

Qty	Part Number	Description
X	D205-596-107	CROSSTUBE AFT EXTENDED
1	D6008-180	CROSSTUBE
2	D2940-1	SUPPORT
4	D3595-063-530	RUBBER CUSHION
4	MS21920-28	CLAMP
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

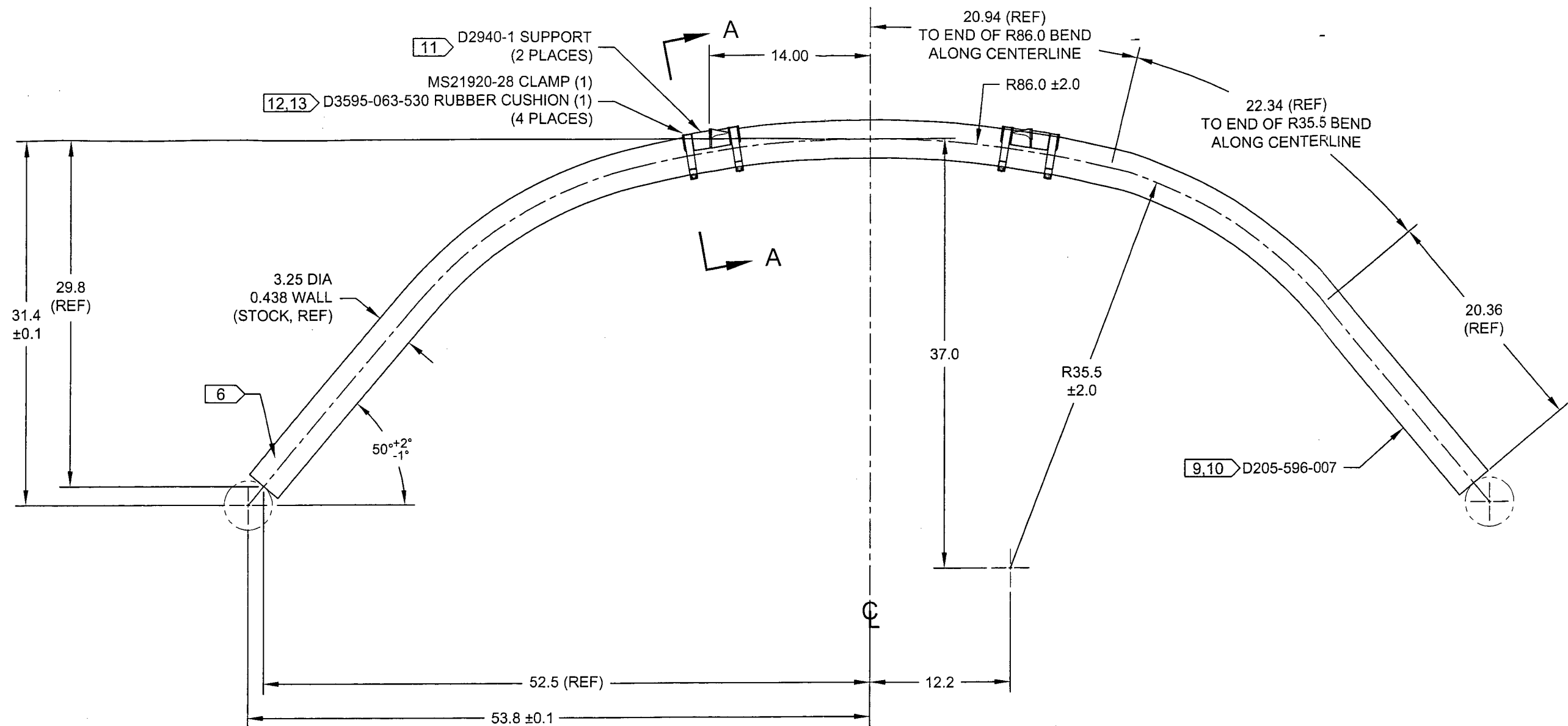
- 1) MATERIAL: MANUFACTURE FROM D6008-180
FINISHED LENGTH = 127.28 ± 0.02
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH
VIBRATING STYLUS
- 7) WEIGHT: 50 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE
- 9) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO
BENDING IS 6% BASED ON O.D.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT
WILL BE IN CONTACT WITH THE CROSSTUBE. LET CURE FOR 12 HOURS AFTER INSTALLATION
AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-28 CLAMPS WITH D3595-063-530 RUBBER CUSHIONS TO SECURE D2940-1
SUPPORT ON THE TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE
CROSSTUBE SUPPORT.
NOTE: IT IS ACCEPTABLE TO SUBSTITUTE MS21920-28 CLAMPS WITH LONGER OR SHORTER
MS21920-XX CLAMPS TO ACCOMODATE VARYING DIAMETERS. ENSURE THERE IS A MINIMUM OF
1.5 THREADS IN SAFETY ON THE NUTS.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB

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36471

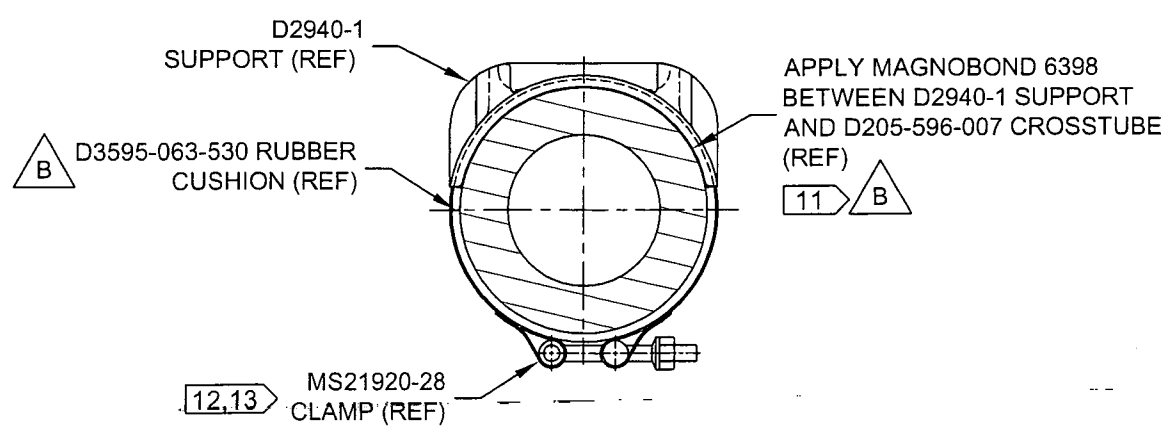
PRELIMINARY ISSUE

07.12.21

B	SUPPORT NOW MAGNOBONDED; REMOVE D2856-600-1009 ABRASION STRIP; UPDATED NOTES; ADDED D3595-063-530 CUSHION	MB	07.12.03
A	NEW ISSUE	DS	02.05.27
REV.	DESCRIPTION	BY	DATE
DESIGN	14	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	14		
CHECKED	EL	DRAWING NO.	REV. B
MFG. APPR.	EP	D205-596-107	SHEET 1 OF 2
APPROVED	14	TITLE	SCALE
DE APPR.		CROSSTUBE AFT EXTENDED	NTS
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



D205-596-107 CROSSTUBE AFT EXTENDED



SECTION A-A
SCALE 2:5

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PRELIMINARY ISSUE
07.12.03

DESIGN		DART AEROSPACE LTD.	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D205-596-107	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE AFT EXTENDED	1:10
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PARTS LIST:

Qty	Part Number	Description
X	D205-596-107	CROSSTUBE ASSEMBLY, HI-HI AFT
1	D6008-180	CROSSTUBE
2	D2940-1	SUPPORT
4	D3595-063-530	RUBBER CUSHION
4	MS21920-28	CLAMP
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

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A	NEW ISSUE	DS	02.11.20
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D205-596-107	SHEET 1 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	CROSSTUBE ASSEMBLY, HI-HI AFT	NTS
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